**Herpestes brachyurus**, Short-tailed Mongoose

Assessment by: Duckworth, J.W., Mathai, J., Ross, J. & Wilting, A.


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**Taxonomy**

<table>
<thead>
<tr>
<th>Kingdom</th>
<th>Phylum</th>
<th>Class</th>
<th>Order</th>
<th>Family</th>
</tr>
</thead>
<tbody>
<tr>
<td>Animalia</td>
<td>Chordata</td>
<td>Mammalia</td>
<td>Carnivora</td>
<td>Herpestidae</td>
</tr>
</tbody>
</table>

**Taxon Name:** *Herpestes brachyurus* Gray, 1837

**Synonym(s):**
- *Herpestes hosei* Jentink, 1903
- *Urva brachyura* (Gray, 1837)

**Common Name(s):**
- English: Short-tailed Mongoose

**Taxonomic Notes:**
*Herpestes hosei*, named from one specimen from Borneo, was treated as a separate species by Payne *et al.* (1985) but was considered a synonym of *H. brachyurus* by Corbet and Hill (1992) on morphological grounds and by Veron *et al.* (2015) after genetic analysis. In the early-mid 20th century, *H. semitorquatus* and *H. fuscus* were sometimes considered conspecific with *H. brachyurus*, but are now universally considered to be valid species (see Van Rompaey 2000). Various subspecies of *H. brachyurus* have been proposed. The Philippine form was noted as startlingly distinct from the other forms by Allen (1910), while Wilson *et al.* (2006) considered that it would be better treated as a distinct species, although they did not explain under which characters. Mitochondrial DNA and morphology suggest that this population is in fact more closely related to Collared Mongoose than to Short-tailed Mongoose (Veron *et al.* 2015), so Philippine animals have been excluded from this account. Veron *et al.* (2015) found that Bornean Short-tailed Mongooses differed markedly in mitochondrial DNA from Sumatran/peninsular Malaysian ones, such that they might better be considered different species; there are also dental differences. Pending further investigation they remain treated together here.

**Assessment Information**

**Red List Category & Criteria:** Near Threatened ver 3.1

**Year Published:** 2016

**Date Assessed:** March 3, 2015

**Justification:**
Short-tailed Mongoose is listed as Near Threatened because in some parts of its range it is probably in a steep habitat-driven decline. Its global range and inferred population are both well in excess of the thresholds that would warrant even Near Threatened. The overall decline rate is not known, and needs to be considered separately for each land-mass. In Borneo it is inferred, from the species's use of a wide altitudinal range and of heavily modified habitats (at least, when some native forest remains nearby), to be way below the 25% per three generations (taken as about 13 years, following Pacifici *et al.* 2013) that would indicate a Near Threatened categorisation. The peninsular Malaysia population might well be declining sufficiently fast to warrant a regional threat category, but has plausibly, in the last 13 years, exited its period of steepest decline. Whereas on Sumatra, conversion rates of forest in the lowlands...


http://dx.doi.org/10.2305/IUCN.UK.2016-1.RLTS.T41610A45206655.en
and low hills (which are provisionally assumed to hold the bulk of the island’s population) were very high during 2001-2014 and are expected to remain so for the subsequent three generations. An examination of loss of superficially suitable habitat (forest below 500 m in peninsular Malaysia and in Sumatra, with forest below 1,500 m in Borneo) between 2000 and 2010 based on information from Miettinen et al. (2011) suggests an overall habitat loss of 21% in the 10-year period (27% in 13 years) indicating a categorisation of Near Threatened based on past decline rates which are expected to continue into the future.

Previously Published Red List Assessments
1996 – Lower Risk/least concern (LR/lc)

Geographic Range

Range Description:
There are records of Short-tailed Mongoose from Malaysia (both West [peninsular] and East [Borneo]), Indonesia (Borneo and Sumatra) and Brunei (e.g., Wells 1989, Van Rompaey 2000, Belden et al. 2007, Jennings and Veron 2011, Duckworth et al. in prep.). Mongooses until recently generally placed within Short-tailed Mongoose occur in the Philippines (Palawan and Busuanga [Calamian islands]) (Heaney et al. 1998), but recent genetic and morphological investigations indicate these animals are closer to Collared Mongoose *H. semitorquatus* (Veron et al. 2015). Wozencraft (2005) stated that Short-tailed Mongoose occurs in Singapore; whilst biogeographically plausible, this might have been based on animals held in the Singapore Zoo (Wells 1989); there are no records or plausible suggestions, historical or recent, of wild occurrence in the country (Medway 1983, M.A.H. Chua pers. comm. 2013, C.H.S. Low pers. comm. 2013). Short-tailed Mongoose is listed as also occurring in Viet Nam by Wozencraft (2005); there seems to be no primary indication of this, and biogeographically its occurrence is unlikely (S.I. Robertson pers. comm. 2006, D.H.A. Willcox pers. comm. 2014). The subspecies *H. b. javanensis* was described from a zoo specimen on Java, Indonesia, but there are no solid field records from the island (Van Rompaey 2000, Jennings and Veron 2011) and given the level of survey, historical and recent, on this island, it is highly unlikely that it is native there.

Wells (1989) drew attention to a mongoose specimen in the American Museum of Natural History labelled from Trang, Thailand, AMNH M-31597. This specimen has been accepted by some authors as evidence of the Short-tailed Mongoose’s occurrence in Thailand’s far south, which would not be surprising, given its occurrence in adjacent peninsula Malaysia north to 4 to 5 degrees north (Wells 1989). However, the history of labelling of this specimen is inconsistent, and other implausible localities for other species from the same collector mean more detailed inspection of all relevant documentation is needed before considering this a valid Thai record (Chutipong et al. 2014). Extensive recent camera-trapping in Thailand’s far south has not found Short-tailed Mongoose (Chutipong et al. 2014), although effort (spatial spread and intensity) has not been sufficient to infer thereby the species’s absence.

Across its distribution, it ranges from sea-level up to 1,500 m a.s.l., but altitudinal use differs between land-masses (see ‘Habitats and ecology’).

Country Occurrence:
Native: Brunei Darussalam; Indonesia (Kalimantan, Sumatera); Malaysia (Peninsular Malaysia, Sabah, Sarawak)
Distribution Map

*Herpestes brachyurus*

Range

- Extant (resident)

Compiled by:

IUCN (International Union for Conservation of Nature)
Population

Short-tailed Mongoose population status appears to vary between land-mass. In Borneo it is both geographically and ecologically widespread, and at least locally common (Duckworth et al. in prep.) and, particularly bearing in mind habitat use on Borneo (see 'Habitats and ecology' section), the population is evidently large. In West Malaysia, Wells (1989) traced rather few records, all from lowland forest; a pattern that has not changed. While the species still survives at one of the localities identified by Wells (1989), Krau Wildlife Reserve (Jennings et al. 2010), several camera-trap surveys (which record the species widely on Borneo; Duckworth et al. in prep.) in various other parts of the peninsula have not found it, even though the camera-trapping style successfully found Crab-eating Mongoose Herpestes urva (e.g., Kawanishi and Sunquist 2004, Hedges et al. 2013, K. Kawanishi pers. comm. 2014). Short-tailed Mongoose’s occurrence on the peninsula is clearly ecologically localized (probably reflecting a restriction to lowland evergreen forest there; see ‘Habitats and ecology’ section). No detailed collation of Sumatran records exists. Whilst it evidently occurs widely there (Jennings and Veron 2011), it has not been found by camera-trapping in some large areas with high effort (Holden 2006, McCarthy and Fuller 2014, WCS Indonesia Programme pers. comm. 2006), although it has in others (Maddox et al. 2007, A.M. Mobrucker pers. comm. 2014).

There is no direct information available on the population trend on any land-mass; some inference can be made from habitat trends (see ‘Threats’ section).

Current Population Trend: Decreasing

Habitat and Ecology (see Appendix for additional information)

Although little remains known on this species' natural history, it now seems very likely that basic habitat-use differs between land-masses.

On Borneo it occurs in many habitats, including highly degraded and fragmented areas such as gardens and suburbs, up to 1,500 m (Payne et al. 1985, Duckworth et al. in prep., J. Ross and A.J. Hearn pers. comm. 2014). There seems to be no evidence of extensive use of interior oil palm plantation. In two such plantations in Sabah, it was found in one but not the other; in forest contiguous with the latter it was found only very rarely (Sepilok Forest Reserve), forestalling conclusion about its response to oil palm per se. In the former, it was found in plantation only close to the plantation–forest boundary (J. Ross pers. comm. 2014). Overall, the species on Borneo is perhaps dependent upon native forest but ranges freely into anthropogenic habitats. Further information might modify this conclusion.

By contrast, in peninsular Malaysia all records with habitat detail come from in or directly adjacent to primary or regenerating evergreen forest and from below 160 m (Wells 1989, Jennings et al. 2010). The high survey effort in altitudes above this (both direct observation and camera-trapping in ways successfully finding Crab-eating Mongoose) gives a high confidence in concluding that Short-tailed Mongoose is effectively confined to the extreme lowlands on the peninsula.

Little comparable information on distribution with respect to either habitat condition or altitudinal range has been traced for Sumatra, but Maddox et al. (2007) did not find the species in oil palm plantations despite 25 camera-trap records from forest in the same landscape and high survey effort in the oil palm plantation, indicating at least at this site that oil palm is eschewed. A.M. Mobrucker (pers.
camera-trapped it at 16 stations in the Bukit Tigapuluh Landscape, Central Sumatra, all in the lowlands, in secondary forest and scrub. M. Luskin (pers. comm. 2014) has camera-trapped the species in Leuser Landscape a few times, at 100-260 m a.s.l. On the available evidence, Short-tailed Mongoose habitat-use on Sumatra perhaps resembles that on the peninsula more than that on Borneo.

Five Short-tailed Mongooses radio-tracked in Krau Wildlife Reserve, West Malaysia, were diurnal, solitary and territorial. Their home ranges were amid forest (no information is given on trapping effort outside forest, however) from which they ranged somewhat into adjacent plantations within which they used remaining patches and strips of native vegetation. Nine night-time rest sites were recorded for four individuals; all were within lowland forest. A daytime rest site found for a female was situated within a hollow tree log (Jennings et al. 2010). There seems to be little comparable information from Borneo or Sumatra, although on Borneo (at least) the species is known to be almost entirely diurnal (J. Ross pers. comm. 2014). The diet includes invertebrates and small vertebrates (Davis 1962, Payne et al. 1985).

**Systems:** Terrestrial

**Use and Trade**

Short-tailed Mongoose is taken to some extent as part of the general hunting bag, but no targeted harvest is known from any part of its range.

**Threats (see Appendix for additional information)**

The different habitat use of this ‘species’ (see 'Taxonomic notes') between land-masses requires consideration of threats specific to each land-mass. There is no evidence that Short-tailed Mongoose can survive in plantations or other non-forest habitats remote from native forest in any land-mass. Similarly there is no evidence that it is hunted (as targeted quarry or as by-catch) in any land-mass at levels high enough to drive declines within remaining suitable habitat. Therefore, forest loss rates are likely to provide a reasonable indicator of population decline rates.

In Borneo the species is geographically and altitudinally widespread, and evidently occurs frequently in degraded and fragmented habitats (Duckworth et al. in prep.). While large-scale deforestation of Borneo in recent decades will have driven large declines in the Bornean population, there is no evidence of major threats within remaining suitable habitat. Some level of retributory killing as a (perceived or actual) predator of small livestock is likely.

In the Malay peninsula, the restriction to altitudes below 160 m and to native forest means that huge declines will have occurred in the latter half of the twentieth century, with the large-scale conversion of lowland forest to plantations. Rates of conversion have recently dropped considerably (because little remains to be converted outside legally protected areas), but the suitability of the present landscape to peninsular Short-tailed Mongoose is difficult to evaluate. There is no meaningful information on patch size required for viable populations, or on dispersal through habitats that cannot maintain the species. Although it is not known to be, it is quite plausible that the peninsular population is in ongoing decline and would warrant conservation attention.

The level of threat on Sumatra is unclear. Lowland forest loss on Sumatra is proceeding extremely rapidly, and if the species is tied to lowland forest there, major declines will be ongoing. However, if it

has an altitudinal distribution similar to that in Borneo and if it uses anthropogenic habitats, declines in Sumatra will be much shallower. While an exhaustive presentation of Sumatran records with altitude and habitat condition remains to be conducted, those few records with precise altitude traced for this assessment were all from the lowlands and, because the species is evidently localized on the island, even in old-growth forest, it is possible that current rates and patterns of forest loss on Sumatra are causing serious reductions on the island.

**Conservation Actions** (see Appendix for additional information)

Short-tailed Mongoose is protected in all of Malaysia and Indonesia, but receives little direct conservation attention. This is appropriate on Borneo, but not in West Malaysia. It has been found in many protected areas in Borneo, and several in West Malaysia and Sumatra. The most urgent conservation needs comprise:

Taxonomic clarification. Short-tailed Mongoose populations of (i) peninsular Malaysia and Sumatra and (ii) Borneo are distinct in mitochondrial DNA by a level suggestive of species divergence, and this is supported by dental differences (Veron et al. 2015). If further information shows them to be distinct species, and if the habitat use of the form on Sumatra echoes that in peninsular Malaysia, then the peninsular Malaysia / Sumatra form is a cryptic species that is probably globally threatened (in common with many other peninsula/Sumatran lowland forest obligate mammals and birds).

Habitat-use clarification for Sumatra. The extent to which Sumatran Short-tailed Mongoose uses hill and montane areas, and anthropogenic areas at any altitude, warrants priority assessment, as these attributes have a large effect on how threatened it is on the island.

Site protection in peninsular Malaysia. All evidence suggests that the peninsular Malaysian Short-tailed Mongoose, whatever its taxonomic rank, occupies a narrow and threatened range of habitats. Effective protection of old-growth forest is vital. Much of that which survives is already within protected areas, but these vary widely in their effectiveness at preventing illegal hunting and clearance.

**Credits**

**Assessor(s):** Duckworth, J.W., Mathai, J., Ross, J. & Wilting, A.

**Reviewer(s):** Schipper, J.

Bibliography


Duckworth, J.W. et al. in prep.. Predicted distribution of Short-tailed Mongoose *Herpestes brachyurus* in Borneo.


**Citation**


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**External Resources**

For Images and External Links to Additional Information, please see the Red List website.
Appendix

Habitats
(http://www.iucnredlist.org/technical-documents/classification-schemes)

<table>
<thead>
<tr>
<th>Habitat</th>
<th>Season</th>
<th>Suitability</th>
<th>Major Importance?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Forest -&gt; 1.6. Forest - Subtropical/Tropical Moist Lowland</td>
<td>Resident</td>
<td>Suitable</td>
<td>Yes</td>
</tr>
<tr>
<td>1. Forest -&gt; 1.7. Forest - Subtropical/Tropical Mangrove Vegetation Above High Tide Level</td>
<td>Unknown</td>
<td>Marginal</td>
<td>-</td>
</tr>
<tr>
<td>1. Forest -&gt; 1.8. Forest - Subtropical/Tropical Swamp</td>
<td>Resident</td>
<td>Suitable</td>
<td>No</td>
</tr>
<tr>
<td>1. Forest -&gt; 1.9. Forest - Subtropical/Tropical Moist Montane</td>
<td>Resident</td>
<td>Suitable</td>
<td>Yes</td>
</tr>
<tr>
<td>3. Shrubland -&gt; 3.6. Shrubland - Subtropical/Tropical Moist</td>
<td>Resident</td>
<td>Marginal</td>
<td>-</td>
</tr>
<tr>
<td>3. Shrubland -&gt; 3.7. Shrubland - Subtropical/Tropical High Altitude</td>
<td>Unknown</td>
<td>Unknown</td>
<td>-</td>
</tr>
<tr>
<td>14. Artificial/Terrestrial -&gt; 14.4. Artificial/Terrestrial - Rural Gardens</td>
<td>Unknown</td>
<td>Marginal</td>
<td>-</td>
</tr>
<tr>
<td>14. Artificial/Terrestrial -&gt; 14.6. Artificial/Terrestrial - Subtropical/Tropical Heavily Degraded Former Forest</td>
<td>Resident</td>
<td>Marginal</td>
<td>-</td>
</tr>
</tbody>
</table>

Threats
(http://www.iucnredlist.org/technical-documents/classification-schemes)

<table>
<thead>
<tr>
<th>Threat</th>
<th>Timing</th>
<th>Scope</th>
<th>Severity</th>
<th>Impact Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stresses: 1. Ecosystem stresses -&gt; 1.1. Ecosystem conversion 1. Ecosystem stresses -&gt; 1.2. Ecosystem degradation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Agriculture &amp; aquaculture -&gt; 2.2. Wood &amp; pulp plantations -&gt; 2.2.1. Small-holder plantations</td>
<td>Ongoing</td>
<td>Majority (50-90%)</td>
<td>Slow, significant declines</td>
<td>Medium impact: 6</td>
</tr>
<tr>
<td>Stresses: 1. Ecosystem stresses -&gt; 1.1. Ecosystem conversion 1. Ecosystem stresses -&gt; 1.2. Ecosystem degradation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Agriculture &amp; aquaculture -&gt; 2.2. Wood &amp; pulp plantations -&gt; 2.2.2. Agro-industry plantations</td>
<td>Ongoing</td>
<td>Majority (50-90%)</td>
<td>Slow, significant declines</td>
<td>Medium impact: 6</td>
</tr>
<tr>
<td>Stresses: 1. Ecosystem stresses -&gt; 1.1. Ecosystem conversion 1. Ecosystem stresses -&gt; 1.2. Ecosystem degradation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Biological resource use -&gt; 5.1. Hunting &amp; trapping terrestrial animals -&gt; 5.1.1. Intentional use (species is the target)</td>
<td>Ongoing</td>
<td>Minority (50%)</td>
<td>Negligible declines</td>
<td>Low impact: 4</td>
</tr>
<tr>
<td>Stresses: 2. Species Stresses -&gt; 2.1. Species mortality</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Biological resource use -&gt; 5.1. Hunting &amp; trapping terrestrial animals -&gt; 5.1.3. Persecution/control</td>
<td>Ongoing</td>
<td>Majority (50-90%)</td>
<td>Negligible declines</td>
<td>Low impact: 5</td>
</tr>
<tr>
<td>Stresses: 2. Species Stresses -&gt; 2.1. Species mortality</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
5. Biological resource use -> 5.2. Gathering terrestrial plants -> 5.2.2. Unintentional effects (species is not the target)  

| Ongoing | Minority (50%) | Negligible declines | Low impact: 4 |

Stresses: 1. Ecosystem stresses -> 1.2. Ecosystem degradation

5. Biological resource use -> 5.3. Logging & wood harvesting -> 5.3.3. Unintentional effects: (subsistence/small scale) [harvest]  

| Ongoing | Minority (50%) | Negligible declines | Low impact: 4 |

Stresses: 1. Ecosystem stresses -> 1.2. Ecosystem degradation

5. Biological resource use -> 5.3. Logging & wood harvesting -> 5.3.4. Unintentional effects: (large scale) [harvest]  

| Ongoing | Minority (50%) | Negligible declines | Low impact: 4 |

Stresses: 1. Ecosystem stresses -> 1.2. Ecosystem degradation

7. Natural system modifications -> 7.2. Dams & water management/use -> 7.2.10. Large dams  

| Ongoing | Minority (50%) | Negligible declines | Low impact: 4 |

Stresses: 1. Ecosystem stresses -> 1.1. Ecosystem conversion
2. Species Stresses -> 2.2. Species disturbance

### Conservation Actions in Place

**Conservation Actions in Place**

(\[http://www.iucnredlist.org/technical-documents/classification-schemes\])

<table>
<thead>
<tr>
<th>In-Place Research, Monitoring and Planning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Action Recovery plan: No</td>
</tr>
<tr>
<td>Systematic monitoring scheme: No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>In-Place Land/Water Protection and Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conservation sites identified: Yes, over part of range</td>
</tr>
<tr>
<td>Occur in at least one PA: Yes</td>
</tr>
<tr>
<td>Invasive species control or prevention: Not Applicable</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>In-Place Species Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Harvest management plan: No</td>
</tr>
<tr>
<td>Successfully reintroduced or introduced beningly: No</td>
</tr>
<tr>
<td>Subject to ex-situ conservation: No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>In-Place Education</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subject to recent education and awareness programmes: No</td>
</tr>
<tr>
<td>Included in international legislation: No</td>
</tr>
<tr>
<td>Subject to any international management/trade controls: No</td>
</tr>
</tbody>
</table>

### Conservation Actions Needed

(\[http://www.iucnredlist.org/technical-documents/classification-schemes\])
Conservation Actions Needed

2. Land/water management -> 2.1. Site/area management

5. Law & policy -> 5.4. Compliance and enforcement -> 5.4.2. National level

5. Law & policy -> 5.4. Compliance and enforcement -> 5.4.3. Sub-national level

Research Needed
(http://www.iucnredlist.org/technical-documents/classification-schemes)

Research Needed

1. Research -> 1.1. Taxonomy

1. Research -> 1.2. Population size, distribution & trends

1. Research -> 1.3. Life history & ecology

1. Research -> 1.5. Threats

3. Monitoring -> 3.4. Habitat trends

Additional Data Fields

Distribution
Lower elevation limit (m): 0
Upper elevation limit (m): 1500

Population
Extreme fluctuations: No
Population severely fragmented: No
All individuals in one subpopulation: No

Habitats and Ecology
Generation Length (years): 4.75
Movement patterns: Not a Migrant
The IUCN Red List Partnership

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